

1 1. In a system having a multi-speed engine with an air inlet line
2 connected to said engine, a Helmholtz resonator structure comprising:
3 a closed chamber defining a Helmholtz resonator continuously
4 operatively connected to said inlet line via a restricted connection; and
5 means for changing the frequency response of said Helmholtz
6 resonator responsive to changes in speed of said engine.

1 3. The Helmholtz resonator of claim 1 wherein said means for
2 changing the frequency response includes at least one restricted connection which is
3 selectively connected between said chamber and said inlet line.

1 4. The Helmholtz resonator of claim 3 wherein said means for
2 changing the frequency response further includes means for effectively changing the
3 volume of said closed chamber connected to said inlet line via said restricted
4 connections.

1 5. A refrigeration system having a multi-speed engine with an
2 inlet line connected to said engine, microprocessor means for controlling the speed of
3 said engine, the improvement comprising:

4 a closed chamber defining a Helmholtz resonator continuously
5 operatively connected to said inlet line via a restricted connection; and

6 means for changing the frequency response of said Helmholtz
7 resonator responsive to changes in speed of said engine.

1 6. The Helmholtz resonator of claim 5 wherein said means for
2 changing the frequency response includes means for effectively changing the volume
3 of said closed chamber connected to said inlet line.

1 7. The Helmholtz resonator of claim 5 wherein said means for
2 changing the frequency response includes at least one restricted connection which is
3 selectively connected between said chamber and said inlet line.
4

1 8. The Helmholtz resonator of claim 7 wherein said means for
2 changing the frequency response further includes means for effectively changing the
3 volume of said closed chamber connected to said inlet line via said restricted
4 connections.

100610001300